



*Fairfax County*  
**VIRGINIA**



## **SECTION 1**

### **IT GOVERNANCE**

# IT GOVERNANCE

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## SECTION 1 IT GOVERNANCE

### PLAN OVERVIEW

Like many governments faced with growth in demand for services while confronting a changing economy, the County is faced with major challenges and opportunities where IT innovation is essential. These challenges and opportunities are created by heightened expectations from the County's constituents and business community who need to interact and conduct business with the County utilizing modern automation capabilities combined with the need to leverage and enhance limited staff resources necessary to accomplish the work, especially in an atmosphere of economic decline. Recognizing that IT innovation fuels business transformation and responsiveness, the expectation for nimble IT enabled service on demand occurs within an environment of rapid change and finite resources. The County's Information Technology (IT) capabilities must be contemporary, flexible, scalable, and secure with the ability to respond to ever changing requirements. The County's IT environment builds on an enterprise architecture that includes standard platforms and tools that supports a variety of needs and a supportable portfolio of systems. The supporting operation is designed to ensure optimum performance, implementation of solid products, and faster solution delivery at a fully leverage cost.

To enable Fairfax County's technology program to meet the challenge, continued emphasis is placed on implementing systems that provide improved service efficiencies, on-line capabilities, promote cross functional business processes, enable data mining for more effective decision making, make information more publicly accessible, enable key County priorities such as Telework , Cool Counties initiatives, Public Safety, Land Development initiatives, and maintain a supportable and secure infrastructure. The projects enable more effective internal communication and use of information within the County government organization, and externally with the community, allowing secure access to County data and services. Emphasis is also placed on processes to ensure that IT projects are managed consistently through proper

levels of oversight and tracking, and ensure that IT investments are leveraged, deliver a return on the investment and are aligned with the County's strategic goals.

This plan summarizes the County's underlying principles for IT Investments and Governance (*Section 1*); Initiatives and Strategic Directions (*Section 2*); current IT Projects and Planned Enhancements (*Section 3*); Management Controls and Processes for projects (*Section 4*); and the foundation Information Technology Architecture (*Section 5*). The plan describes adopted technology investments that accomplish identified goals and objectives; provides status of ongoing project accomplishments; identifies resources required for implementation; and states the return on investment benefits projected by the sponsors of the projects. Projects are linked to agency sponsor strategic plans and the Board of Supervisor's goals and Vision Elements.

The modernization efforts described in this plan are funded in the Information Technology Fund - Fund 104 and Fund 120 (E-911). Sometimes projects included in the IT Plan are funded from other sources such as sponsor agency income funds or other monies to take advantage of total available County dollars, augment investment funding capacity, and provide additional opportunities to meet IT investment needs. Governance, architecture, and infrastructure for supporting IT projects are described within this plan, however, ongoing Department of Information Technology (DIT) operating and personnel costs which are funded in the General Fund - Fund 001 and the Technology Infrastructure Fund - Fund 505, and the routine operational activities, on-going support efforts, and normal upgrades and maintenance work is not reflected in this plan. Together, the four funds support the comprehensive Information Technology delivery for all agencies, lines of business and services. Additional details of each fund can be found in the Fairfax County Fiscal Year 2009 Adopted Budget Plan.

## Information Technology Goals

In recognition of the need to link the County's Information Technology efforts more closely to its business goals, the senior management of the County established the County-wide Information Technology (IT) goals, determining priorities within the context of the service demands that must be met within resource availability and opportunities. The formulation of the goals provided a framework by which the allocation of critical resources would be directed and categorized and aligned with County goals. The goals are reviewed each year for applicability and relevance against new demands on county business requirements and IT industry trends.

Based on global changes in social and economic paradigm shifts, the following priorities have been validated and are adopted for funding:

- ▶ *Mandated Requirements*
- ▶ *Leveraging of Prior Investments*
- ▶ *Enhancing County Security*
- ▶ *Improving Service Quality and Efficiency*
- ▶ *Ensuring a Current and Supportable Technology Infrastructure*



## 1. TECHNOLOGY ORGANIZATION AND GOVERNANCE

Technology is managed as an enterprise asset in Fairfax County. The Department of Information Technology (DIT) is responsible for direction of and execution of information technology and communications systems and support services on an enterprise-wide infrastructure, architecture framework and standards for most systems. County agencies have a limited number of technology staff that support small scale agency business specific point solutions or industrial systems and matrix to DIT. The County's Chief Technology Officer is the Director of the County's Department of Information Technology.

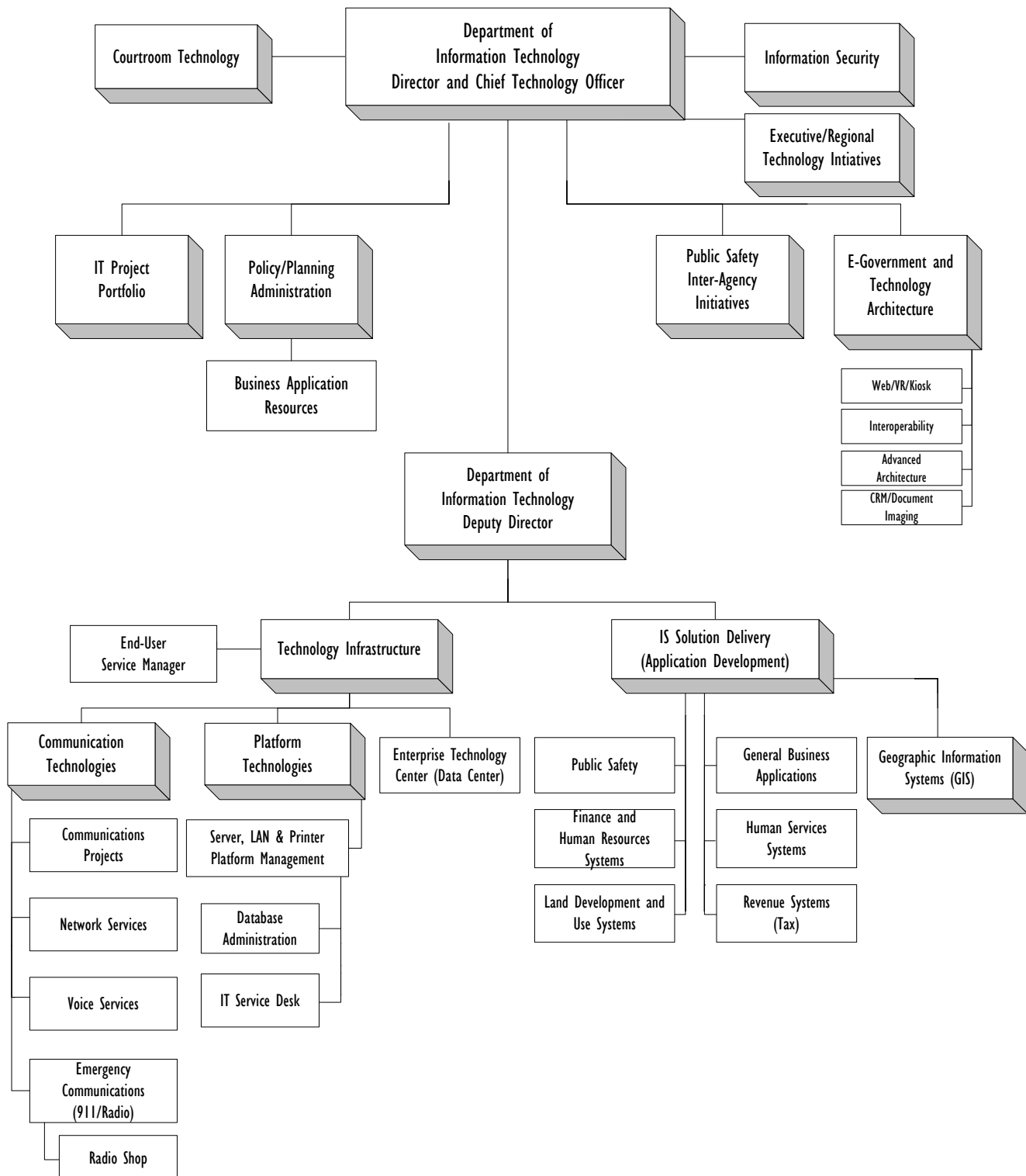
The Deputy County Executive for Information Departments (DCE) is responsible for the overall direction for innovation and enterprise information policy. The DCE directs a broad range of information related departments and related agency functions, leading efforts that integrate with or enhance the mission of delivering strategic technology initiatives. This model groups the County's information programs and services under a single authority to provide efficient and effective constituent services. Collaboration among the departments which include the Department of Information Technology (DIT), Fairfax County Library/Archives (FCPL), Department of Cable Communications and Consumer Protection (DCCCP) and the Office of Public Affairs (OPA) deliver programs that make up the county's e-Government channels, public access capabilities, enterprise infrastructure architecture, document management, interoperability and county-wide communications strategy. In addition the DCE has oversight of the Health Insurance Portability Accountability Act (HIPAA) Compliance Office that works directly with DIT's Information Security Office to ensure that an appropriate IT security architecture, standards and enforcement mechanism are in place to protect HIPAA and other privacy laws for covered systems and data.

The information and web content function in the Office of Public Affairs works closely with the DCE to develop a comprehensive communications message strategy and to ensure the integrity of content for published information served through the County E-government programs. The DCE also serves as the liaison to the Economic Development Authority in conveying the County's best technology practices and assisting with marketing the County to prospective businesses. The DCE's broad responsibility for information spans policy, information content strategy, books, television, enterprise technology architecture, management of documents, and compliance.

In FY 1999 an internal County executive group, the Senior IT Steering Committee, was created to assist and advise the DCE and Chief Technology Officer. Today, this group includes the County Executive, the Deputy County Executives, Director of the Department of Management and Budget, and Director of the Department of Information Technology/CTO. The committee's work is augmented by the Senior Management Team composed of County department heads for participation in key policy issues. The Senior IT Steering Committee meets on a regular basis to review specific IT initiatives, opportunities and issues; set the County's IT strategy based on the Board of Supervisors' direction; and approve the annual IT investment plan. For strategy and governance specifically focused on the County's e-government program, the DCE hosts and chairs the E-government Steering Committee, including the directors of DIT, OPA, FCPL, and DCCCP, as well as the County's WEB and Public Access Technology Director (DIT e-Government group), and the WEB Content Director in OPA. This committee collaborates with the DCE on policy and opportunities to expand the use and effectiveness of on-line capabilities through the e-government channels and new cyber services such as Social Media. In addressing policy issues, the group is assisted by the IT Security Director and the Office of the County Attorney.

## 1.1 DEPARTMENT OF INFORMATION TECHNOLOGY ORGANIZATION

**Fairfax County  
Department of Information Technology  
Organization Chart**



The Department of Information Technology (DIT) provides leadership, process, governance, architecture, resources and expertise in deploying modern information technologies to improve government efficiency and citizen access to government information and services. To provide focus and direction to staff within the department and to help plan for the future, an overall mission was established together with eight goals. The mission and goals statements were developed with considerable input from staff, and the Senior IT Steering Committee regarding the important issues facing the department.

Fairfax County continues to make the necessary investments in information technology hardware and software, which through careful planning, cooperative business and technical execution provides its citizens with a return on investment in the form of improved services. The department's goals were established to energize the department in performing its functions of developing and maintaining current information technology systems, and providing a technology infrastructure and customer service support to County agencies. The Department of Information Technology is charged with establishing technology architecture, implementing and managing systems, applications, communications, and the overall management and security of the County's information assets.

The organizational structure of the Department of Information Technology (DIT) has evolved over the years to align with changing priorities, trends and expertise requirements, and to leverage technology platforms and available resources. It is designed to address the ongoing evolution of technology and its utilization in support of the business functions within County government. This evolution has seen a tremendous growth in web based systems and distributed architectures and wireless hand-held computers, as well as the number of platforms that support enterprise-class solutions and software applications used in support of various County functions. These information technology systems have become crucial components in the day-to-day operations of almost all areas of County government, and the increasing complexity and sophistication of these systems require well-trained end users and support staff.

DIT is organized into subject matter expert groups: Application Solution Delivery supports both enterprise-wide systems including corporate applications,

document management, CRM platform, and geographical information systems that are used by all agencies, and agency business specific applications development and support; Technology Infrastructure manages all hardware, communications and network platforms enterprise-wide, integration tools, enterprise messaging applications, desktops and the network based digital multi-function printing devices that support countywide distributed printing, print-on-demand, electronic transfer of printed information, and the help desk service. Policy, Planning and Administration provides DIT administrative support functions and IT policy support and compliance oversight; E-government provides architectural direction, standards and strategic innovation for on-line applications and E-government technology programs including web, IVR, Kiosk and Social Media and information interoperability architecture. In addition, in FY2005, the Public Safety group was established to focus efforts on the integrating systems in public safety, and address homeland security, and regional collaborative and interoperability initiatives and mandates. Finally the Information Security Office reports directly to the Chief Technology Officer and has authority in monitoring, investigating, and compliance activities to ensure county IT assets are safeguarded.

The Department of Information Technology is charged with delivering quality and innovative information technology solutions that provide citizens, the business community and County staff solid technical capabilities that ensure the integrity of the County's information, service efficiency and convenient access to appropriate information and services. DIT embraces the following goals:

- Goal 1:** Deliver timely and effective responses to customer requirements through teamwork.
- Goal 2:** Provide vision, leadership, and a framework for evaluating emerging technologies and implementing proven information technology solutions.
- Goal 3:** Provide citizens, the business community and County staff with convenient access to appropriate information and services through technology.
- Goal 4:** Work with County agencies to improve business operations by thoroughly understanding business needs and by planning, implementing and managing the best information technology solutions available.



- Goal 5:** Guarantee a reliable communication and computer infrastructure foundation on which to efficiently conduct County business operations today and in the future.
- Goal 6:** Effectively communicate information about plans, projects, and achievements to County staff and customers.
- Goal 7:** Develop and maintain technically skilled staff competent in current and emerging information technology and a user community that understands and can employ modern technologies to maximize business benefits.
- Goal 8:** Ensure effective technical and fiscal management of the department's operations, resources, technology projects and contracts.

In addition to the Department of Information Technology's Mission and Goals, Fairfax County Information Technology (IT) projects and processes are guided by **Ten Fundamental Principles** adopted by the Board of Supervisors in 1996 and updated annually.

1. Our ultimate goal is to provide citizens, the business community, and County employees with timely, convenient access to appropriate information and services through the use of technology.
2. Business needs drive information technology solutions. Strategic partnerships will be established between the stakeholders and County so that the benefits of IT are leveraged to maximize the productivity of County employees and improve customer services.
3. Evaluate business processes for redesign opportunities before automating them. Use new technologies to make new business methods a reality. Exploit functional commonality across organizational boundaries.
4. Manage Information Technology as an investment.
  - a. Annually allocate funds sufficient to cover depreciation to replace systems and equipment before life-cycle end. Address project and infrastructure requirements through a multi-year planning and funding strategy.
  - b. Manage use of funds at the macro level in a manner that provides for optimal spending across the investment portfolio aligned to actualized project progress.
- c. Look for cost-effective approaches to improving "legacy systems". Designate systems as "classic" and plan their modernization. This approach will help extend investments and system utility.
- d. Invest in education and training to ensure the technical staffs in central IT and user agencies understand and can apply current and future technologies.
5. Implement contemporary, but proven, technologies. Fairfax County will stay abreast of emerging trends through an ongoing program of technology evaluation. New technologies often will be introduced through pilot projects where both the automation and its business benefits and costs can be evaluated prior to any full-scale adoption.
6. Hardware and software shall adhere to open (vendor-independent) standards and minimize proprietary solutions. This approach will promote flexibility, inter-operability, cost effectiveness, and mitigate the risk of dependence on individual vendors.
7. Provide a solid technology infrastructure as the fundamental building block of the County's IT architecture to support reliability, performance and security of the County's information assets. Manage and maintain the enterprise network as an essential communications channel connecting people to information and process via contemporary server platforms and workstations. It will provide access for both internal and external connectivity; will be flexible, expandable, and maintainable; be fully integrated using open standards and capable of providing for the unimpeded movement of data, graphics, image, video, and voice.
8. Approach IT undertakings as a partnership of central management and agencies providing for a combination of centralized and distributed implementation. Combine the responsibility and knowledge of central management, agency staff, as well as outside contract support, within a consistent framework of County IT architecture and standards. Establish strategic cooperative arrangements with public and private enterprises to extend limited resources.



9. Consider the purchase and integration of top quality, commercial-off-the-shelf (COTS) software requiring minimal customization as the first choice to speed the delivery of new business applications. This may require redesigning some existing work processes to be compatible with beneficial common practice capabilities inherent in many off-the-shelf software packages, and, achieves business goals. In consideration of this, it is recognized that certain county agencies operate under business practices that have been established in response to specific local interpretations and constraints and that in these instances, the institutionalization of these business practices may make the acquisition of COTS software not feasible. Develop applications using modern, efficient methods and labor-saving tools in a collaborative application development environment following the architectural framework and standards. An information architecture supported by a repository for common information objects (e.g., databases, files, records, methods, application inventories); repeatable processes and infrastructures will be created, shared and reused.
10. Capture data once in order to avoid cost, duplication of effort and potential for error and share the data whenever possible. Establish and use common data and common databases to the fullest extent. A data administration function will be responsible for establishing and enforcing data policy, data sharing and access, data standardization, data quality, identification and consistent use of key corporate identifiers.

In working with DIT, the **Department of Cable Communications and Consumer Protection** has several major areas that fit within the overall provisioning of information services County-wide:

**Communications Policy and Regulation** encourages competition and innovation in Countywide deployment of cable provider services; enforces cable communications legislation and franchise agreements; works with the Telecommunications industry to enable the development of cost effective network services for the public and ensuring a reliable means of mass communication of official information during public safety emergencies. This group works with the Department of Information Technology on a variety of initiatives and FCC regulatory activities that impact telecommunications services for County government managed by DIT.

**Communications Productions** provides award-winning broadcast productions for Fairfax County Government Channel 16, the public information channel, and the Fairfax County Training Network (FCTN). Channel 16 televises over 340 live programs that are also available by video stream, reaching an estimated 600,000 residents with information programming about County programs and services that serve the community. The division also operates an emergency messaging system for residents. This group is part of the E-Government channels and works with DIT in web-based video access.

The mission of **Fairfax County Public Library** system is to provide and encourage the use of library resources and services to best meet the evolving educational, recreational, and informational needs of all the Fairfax County and Fairfax City residents, thereby enhancing individual and community life. The **Library's Technology Vision** augments tradition library services with technologies that provide Fairfax County and City residents' access to electronic information resources locally, nationally and throughout the world. Library staff keeps pace with the rapidly changing environment and uses new technologies to assist patrons and improve service delivery. FCPL's goal is to remain flexible by maximize opportunities to improve services delivery through technology. Working with DIT, FCPL provides Public Access facilities in Libraries where the public can access the Internet through wired workstations and wireless services. The Library's goals for technology are:

- Provide County/City residents access to FCPL resources without constraints of time or location.
- Provide County/City residents access to worldwide electronic information sources.
- Expand access to local information through electronic means.
- Preserve and provide access to Fairfax County and Fairfax City historical documents and images.
- Ensure delivery of electronic library services to physically challenged residents.
- Manage FCPL resources to efficiently deliver library services to residents.

### Fairfax County's Regional and National Prominence in the IT Community

In carrying out its mission, the DCE and/or DIT participate on several key County Committees focused on major County initiatives or operational oversight agendas, for example:

- The Public Safety IT Governance Board
- Emergency Management Coordinating Committee
- Emergency Management Executive Committee
- Public Safety and Transportation Operations Center (PSTOC) Leadership and Executive Committees
- Legacy Systems Executive Committee
- Land Development Systems Steering Committee
- Court Technology Governance Board

Additionally, Fairfax County government's CTO and IT management provide leadership and/or participate on several federal, state, and regional committees including:

- Council of Governments CIOs Committee
- Council of Governments Emergency Preparedness Council
- Council of Governments Interoperability Council
- Regional Working Group for Interoperability (Maryland, Virginia, and DC state and local functional and technical leadership representation)
- Commonwealth of Virginia Interoperability Council
- Federal CIO Council
- National Association of CIOs
- National Association of Telecommunications Officers
- Virginia Local Government Information Technology Executives (VALGITE)
- Northern Virginia Regional Commission
- National Association of Counties
- Public Technologies Incorporated
- CIO Executive Board

In promoting technology in Fairfax County Government, DIT hosts several key events each year including:

- GIS Day where DIT conducts competition among County agencies for new application of the use of geospatial and related technology;
- IT Security Awareness Day, and annual event designed to bring in the latest intelligence in promoting employee awareness and knowledge about risks and responsibility in using technology at work and at home

Over the years, Fairfax County Government's IT organization, the Deputy County Executive for information departments, and the Chief Technology Officer/Director of DIT, have earned numerous awards and recognitions, including:

- Fairfax County's public web site, fairfaxcounty.gov, earned top honors in the Center for Digital Government's "2007 Best of Web" awards competition. As first place winner, the County's web site was recognized as one of the most innovative and user friendly local government portals.
- Fairfax County was also ranked first in the Center for Digital Government's 2005 Digital Counties Survey and ranked in the top five for 2006. The Bertelsmann Foundation of Germany recognized the County's e-Government program in 2002 as one of the four top pace setters of the 12 top e-Government programs in the world.
- In the annual Public Technology Institute 2007-2008 Solutions Awards, Fairfax County was recognized for excellence in its e-Government initiatives.
- In 2007 Fairfax County was recognized as one of the top digital counties in the nation according to an annual survey by the Center for Digital Government and National Association of Counties.
- Fairfax County's Deputy County Executive was one of four state or local government officials to receive the 2003 Federal 100 awarded for work on e-government and geo-spatial projects. He was also among Computerworld Magazine's 100 Information Technology Leaders in January of 2002, and was recognized on Government Technology Magazine's 2002 list of "25 - Doers, Dreamers and Drivers of Information Technology" in US Government. He also was the recipient of Public Technology Institute's 2002 Technology Leadership Award for Large Jurisdictions.
- Government Technology magazine named Fairfax County Chief Technology Officer and Director of Department of Information Technology, as one of government's five most influential female chief information officers in 2007.
- In 2006 Computerworld magazine ranked the Fairfax County Government one of the top 100 places to work in IT in the US.
- The Deputy County Executive and Chief Technology Officer were named 2003 Public Officials of the Year by Governing Magazine.



## ENTERPRISE TECHNOLOGY GOVERNANCE

### 1.2 SENIOR INFORMATION TECHNOLOGY STEERING COMMITTEE

The Senior Information Technology (IT) Steering Committee was formed by the County Executive to provide oversight of IT policy and investments to ensure their alignment and support of strategic and operational business requirements. The committee monitors the entire IT project portfolio to continually assess whether the investments are providing expected benefits. This monitoring process provides a broad perspective from senior executives who independently and objectively evaluate and make decisions on the overall status, mission needs, and priorities for the County. The committee meets quarterly and reviews on-going project status in relationship to the County's strategic business initiatives. Additionally, the committee reviews and provides budget recommendations for new initiatives.



Members of the Senior IT Steering Committee include: the County Executive, Deputy County Executives, the Director of the Department of Management and Budget and the Director of the Department of Information Technology/CTO. The committee may activate a number of sub-committees around specific issues that would report back to Senior IT Steering. As part of the decision making process, the Committee presents and discusses strategic policy issues on behalf of the Senior Management Team which is comprised of all county department heads.

Members of the Senior IT Steering Committee include:

The County Executive, Deputy County Executives

The Director of the Department of Management and Budget

The Director of the Department of Information Technology/CTO.

The Committee may activate a number of sub-committees around specific issues that report their findings back to the Senior IT Steering Committee. As part of the decision making process, the Committee presents and discusses strategic policy issues on behalf of the Senior Management Team which is comprised of all County department heads.

### 1.3 E-GOVERNMENT STEERING COMMITTEE

The e-Government Steering Committee is a subcommittee of the Senior IT Steering Committee and was created to assist the Deputy County Executive for Information with e-Government policy and strategy decisions and ensure enterprise consistency and standards in regards to the County's e-Government Program.

Members of the Committee include:

Deputy County Executive – Chair

Chief Technology Officer, Director of DIT

Director, Public Access & Advanced Technologies, DIT

Director, Office of Public Affairs

Deputy Director, Office of Public Affairs – Communication

Director, Web Content – OPA

Director, Department of Cable Communications and Consumer Protection

Director, Fairfax County Public Libraries

The Steering Committee:

- Considers updates to the Public Web Site content Policy PM NO.13-04
- Creates additional e-Government policies and procedures as necessary

- Assists the Deputy County Executive in consideration of departmental requests for external links, exceptions to policy and the use of emerging e-channels
- Identifies e-Government related issues and ideas for discussion
- Sponsors periodic focus groups, surveys and other public or internal outreach to ensure that the e-Government program is meeting the needs of the County customers
- Investigates and adopts new e-channels- such as social media- to ensure that the County's e-government channels and services meet the needs of the County's external and internal customers
- Initiates pilot projects and conducts after action review of the pilot project
- Recommends changes as necessary to e-Channels or adopts new e-Channels based on customer feedback
- Sponsors projects for inclusion in the County's annual IT Plan

### 1.4 INFORMATION TECHNOLOGY POLICY ADVISORY COMMITTEE

In 1998 the Board of Supervisors created a private sector group named the Information Technology Policy Advisory Committee (ITPAC) to assist the Chief Technology Officer (CTO) with technology direction and validation of trends. ITPAC meets on a regular schedule to review the County's technology posture and key projects, and the annual technology investment plan recommendation. ITPAC serves as advisor to the CTO, providing counsel, experience and support for the IT program.

ITPAC was created by the Fairfax County Board of Supervisors to provide the Board with a source of expert citizen advice regarding information technology strategy. The Board has committed itself to providing the County government with the resources necessary to keep pace with emerging trends in information technology; as well as providing citizens, the business community, and employees timely and convenient

access to information and services through the use of technology; and using new technologies to create new business processes and improve government efficiency. To maintain these commitments, the Board has made substantial, continuing investments in information technology. The ITPAC Committee membership includes:

- One representative appointed by each Board Member (10 in total);
- One representative appointed by the School Board; and
- One representative from each of the following groups:
  - Fairfax County Chamber of Commerce
  - Fairfax County Federation of Civic Associations
  - League of Women Voters
  - Northern Virginia Technology Council



The Committee duties and responsibilities are:

- Keep informed regarding information technology, including telecommunications, developments and provide recommendations to the Board of Supervisors regarding technical improvements to be incorporated in the County computer and telecommunications systems.
- Review the annual Information Technology Plan and information technology budget and make recommendations to the Board of Supervisors.
- Review major information technology acquisition plans and makes recommendations to the Board of Supervisors.
- Bring facts and issues that it deems important to the attention of the Board of Supervisors.
- Undertake such other activities as become appropriate as information technology changes.